

REMARKS

Claims 1-5, 8 and 15-19 are now pending in the application. Claims 1, 4 and 5 have been currently amended and claims 6 and 7 have been canceled. New claims 15-19 have been added. Pending claims 1-5 and 8 stand rejected under 35 U.S.C. § 102 (e). Also, pending claims 6 and 7 stand rejection under 35 U.S.C. § 103 (a). The forgoing amendments and following remarks are considered by Applicants to overcome each rejection raised by the Examiner and to place the application in condition for allowance. An early Notice of Allowance is therefore requested.

I. Claim Objections

The Examiner objects to claim 4 as being of improper dependent form for failing to further limit the subject matter of a previous claim. To expedite prosecution of the application, Applicants have amended claim 4 into independent form. Thus, this objection is rendered moot.

II. Rejection Of Pending Claims 1-5 and 8 Under 35 U.S.C. § 102 (e)

The Examiner has rejected claims 1-5 and 8 under 35 U.S.C. § 102 (e) as being anticipated by Blease et al., U.S. Patent No. 6,585,362, issued July 1, 2003 ("Blease"). Applicants respectfully traverse this rejection.

A. Relevant Law

"A claim is anticipated if each and every limitation is found either expressly or inherently in a single prior art reference." *Bristol-Myers Squibb v. Ben Venue*, 246 F.3d 1368, 1374 (Fed. Cir. 2001). Identity of invention requires that a prior reference disclose to one of ordinary skill in the art all elements and limitations of the patent claim. *Scripps Clinic*

v. Genentech, 927 F.2d 1565, 1576 (Fed. Cir. 1991). Absence from the reference of any claimed element negates anticipation. *Kloster Speedsteel AB v. Crucible, Inc.*, 230 USPQ 81 (Fed. Cir. 1986).

B. Summary of Cited References

Blease discloses an ink composition that includes a colorant and an aqueous carrier, where the ink composition has a dissolved gas content of less than 3 ppm (3 mg/L) as measured on the basis of the amount of dissolved oxygen gas at 20 °C and a static surface tension at 25 °C of greater than 34 dynes/cm (34 mN/m). In addition, Blease discloses that the ink composition is degassed prior to filling the ink cartridge.

C. Argument

The Examiner asserts that Blease discloses an ink composition comprising a colorant and an aqueous carrier, where the ink composition has a dissolved gas content of less than 3 ppm as measured on the basis of the amount of dissolved oxygen gas at 20 °C and a static surface tension at 25 °C of greater than 34 dynes/cm. The Examiner also argues Blease discloses that the ink composition is degassed prior to filling. Thus, the Examiner concludes that the composition taught in Blease anticipates the present invention. Applicants respectfully disagree with the Examiner's analysis.

Currently amended claim 1 defines an ink for ink-jet recording comprising water and a pigment, wherein a surface tension of the ink is not less than 40 mN/m, and an amount of dissolved oxygen in the ink is not more than 4 mg/L.

In the present application, a high recording quality with a sharp image area edge, which is one of the objectives of the present application, can be achieved by using a pigment

rather than a dye in the ink. See, for example, Examples 1-7 and paragraphs [0069] and [0071].

On the other hand, Blease used dyes as the coloring agent in all of the inks of Examples 1 to 10. See Table “Example Ink Formations” in column 7. Thus, the feature defined in amended claim 1 is not disclosed in Blease. Accordingly, Blease fails to teach or disclose each and every limitation of independent claim 1. To the extent that the Examiner finds each and every limitation of claim 1 in Blease, it nonetheless is insufficient for it does not contain an enabling disclosure. Therefore, Blease does not anticipate claim 1. Claims 2 and 3, by virtue of their dependency from claim 1, are similarly considered by Applicants to patentably define themselves and are novel over Blease.

Currently amended claim 4 defines a container comprising an ink for ink-jet recording including water and a pigment, wherein a surface tension of the ink is not less than 40 mN/m, an amount of dissolved oxygen in the ink is not more than 4 mg/L, and the container shuts out oxygen.

As stated above, in the present application, a high recording quality with a sharp image area edge, which is one of the objectives of the present application, can be achieved by using a pigment rather than a dye in the ink. See, for example, Examples 1-7 and paragraphs [0069] and [0071]. The container of the present invention holds the ink for ink-jet recording that includes a pigment not a dye.

On the other hand, Blease used dyes as the coloring agent in all of the inks of Examples 1 to 10. See Table “Example Ink Formations” in column 7. Thus, the feature defined in amended claim 4 is not disclosed in Blease. Accordingly, Blease fails to teach or disclose each and every limitation of independent claim 4. To the extent that the Examiner finds each and every limitation of claim 4 in Blease, it nonetheless is insufficient for it does not contain an enabling disclosure. Therefore, Blease does not anticipate claim 4.

Currently amended independent claim 5 discloses a method for producing an ink for ink-jet recording comprising water and a coloring agent wherein a surface tension of the ink is not less than 40 mN/m. The method in claim 5 comprises preparing the ink and applying a deoxidation treatment to the prepared ink so that an amount of dissolved oxygen contained in the ink is not more than 4 mg/L, wherein the deoxidation treatment is performed by a vacuum thin film deoxidation method.

Blease does not disclose the feature of performing the deoxidation treatment by a vacuum thin film deoxidation method to the prepared ink so that the amount of dissolved oxygen contained in the ink is not more than 4 mg/L. Thus, the feature defined in amended claim 5 is not disclosed in Blease. Accordingly, Blease fails to teach or disclose each and every limitation of independent claim 5. To the extent that the Examiner finds each and every limitation of claim 5 in Blease, it nonetheless is insufficient for it does not contain an enabling disclosure. Therefore, Blease does not anticipate claim 5. Claim 8, by virtue of its dependency from claim 5, is similarly considered by Applicants to patentably define itself and is novel over Blease. For these reasons, reconsideration and withdrawal of the rejection under 35 U.S.C. §102 (e) are respectfully requested.

III. Rejection Of Pending Claims 6 and 7 Under 35 U.S.C. § 103

Claims 6 and 7 stand as rejected under 35 U.S.C. 103(a) as being unpatentable over Blease et al., U.S. Patent No. 6,585,362, issued July 1, 2003 ("Blease").

To advance prosecution of this application, Applicants have incorporated claim 6 into independent claim 5 and canceled claims 6 and 7. Blease teaches several mechanisms for removing dissolved gases from an ink in column 14, lines 50-64. However, as admitted by the Examiner on page 6, second paragraph of the Office Action, Blease does not specifically

teach or suggest the feature that "the deoxidation treatment is performed by a vacuum thin film deoxidation method", as defined in amended claim 5.

In addition, the Examiner asserted that the mechanisms taught by Blease are broad enough to encompass the vacuum thin film deoxidation method. See page 6, second paragraph of the Office Action. However, we believe that the obviousness rejection is inappropriate since the Examiner did not clearly indicate any evidence for her assertion.

Thus, the feature defined in amended claim 5 is not obvious from Blease. Since claims 6 and 7 have been canceled by this amendment, the Examiner's rejection is rendered moot. Thus, withdrawal of the present rejections is respectfully requested.

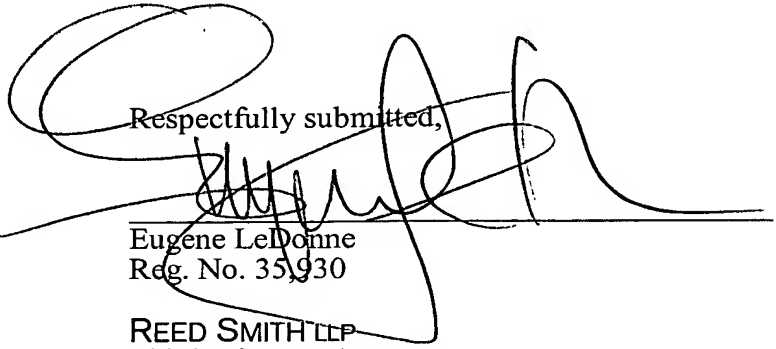
VI. Newly Presented Claims 15-19

Claims 15-19 have been added to the application to recite novel features disclosed in the specification. New independent claim 15 has been added to recite an of ink for ink-jet recording comprising water and a coloring agent having the feature of "an amount of dissolved oxygen in the ink is between about 3 mg/L to about 4 mg/L," and new claim 16 has been added that depend from claim 15. In addition, new independent claim 17 has been added to recite a method for producing an ink for ink-jet recording having the feature of "applying a deoxidation treatment to the prepared ink so that an amount of dissolved oxygen contained in the ink is between about 3 mg/L to about 4 mg/L," and new claims 18-19 has been added that depend from claim 15. New claims 15-19 are fully supported by the specification and no new matter has been added. Blease does not teach or suggest the features of new claims 15-19. Therefore, Blease does not anticipate new claims 15-19 and cannot render new claims 15-19 obvious.

VII. Conclusion

For the reasons presented above, claims 1-5, 8 and 15-19, all the claims pending in the application, are believed by Applicants to define patentable subject matter and should be passed to issue at the earliest possible time. A Notice of Allowance is requested.

Respectfully submitted,


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